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ABSTRACT

A study was conducted at the University of Minnesota's General College to examine the relationship between probationary status and students' gender, ethnicity, and placement test scores. The study involved 186 students on Level 1 probation (i.e., students whose work had fallen below the academic standard for two quarters, including those whose work had improved during their first quarter on probation); 176 students on Level 2 probation (i.e., those whose work had fallen below the minimum standards for three quarters); and 617 students who, after failing to meet academic standards for the first time, had received a general warning letter. An analysis of the gender, ethnicity, and placement test scores of these students revealed the following: (1) no clustering of placement test scores in reading, writing, whole numbers, arithmetic, and algebra was found to suggest that students who earned scores at one or another level of ability were more or less likely to make insufficient academic progress subsequently; (2) there were no significant differences in the placement test scores of Level 1, Level 2, or General Warning students; and (3) no relationship was found between gender/ethnicity or membership in an insufficient academic progress group. (EJV)

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A STUDY OF THE RELATIONSHIP AMONG PLACEMENT TEST SCORES AND GENDER AND ETHNICITY OF STUDENTS IN THREE INSUFFICIENT ACADEMIC PROGRESS GROUPS AT THE END OF FALL QUARTER, 1985

by

Peggy E. O'Hare

The General College faces the critical issue of how best to admit students who have the potential, previously undeveloped or unrecognized, for baccalaureate study at the University of Minnesota. In addressing this critical issue, the more information we have available on both successful students and those who, for a variety of reasons, do not make sufficient academic progress during their time in the College, the more informed our decisions will be.

Professor Peggy O'Hare's study provides the College with information about students who are not making sufficient academic progress. Specifically, it addresses the relationship between entrance placement test scores and insufficient academic progress and the relationship between gender and ethnicity and insufficient academic progress. Her conclusions from this study of students in three insufficient academic progress groups at the end of fall quarter, 1985, should provide some guidance as we explore effective admissions decision-making in the future.

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INTRODUCTION

The General College Student Progress Review

MINIMUM STANDARD OF ACADEMIC PROGRESS

The General College conducts a quarterly review of student academic progress at the end of each academic quarter. The standard for sufficient academic progress is an NPA (numeric point average) of C5 (C minus, on an 11-point scale and a credit completion rate of two-thirds (.66) of the credits attempted.

GENERAL WARNING STATUS

Students who fail to meet this standard for the first time are sent a "General Warning" letter which informs them that they have not made sufficient academic progress, offers them assistance through a variety of listed resources in and outside of General College, and warns them that they will be placed on Level 1 Probation if their work falls below the academic standard again. They are further informed that anyone placed on probation must remain on probation for two academic quarters.

LEVEL 1 PROBATION

Students are placed on Level 1 Probation if their work falls below the academic standard for two quarters. They may remain on Level 1 Probation for a second quarter if, during their first quarter on Level 1 Probation, they meet or exceed the minimum academic standard.

LEVEL 2 PROBATION

Students are placed on Level 2 Probation if their work falls below the minimum academic standard for three quarters. Students who fail to meet the minimum academic standard for four academic quarters are suspended from further registration for one year.

INITIATION OF THE PROBATION SYSTEM

The system of academic progress review described above was instituted and put into effect for the first time during the 1985-86 academic year. To begin the new system of probation, the records of all students registered in General College for one or more quarters during the 1984-85 academic year were reviewed during the summer of 1985.

ACADEMIC PROGRESS REVIEW DURING SUMMER, 1985

All students registered during 1984-85 who had made insufficient academic progress for up to three quarters (N=681) were placed on Level 1 Probation. (No students were given "General Warning" letters during the summer, 1985, review of student progress.) These students were informed that they would remain on probation status for two quarters. If, at the end of fall quarter, 1985, they had made sufficient academic progress, they would remain on Level 1 Probation for one more quarter. If, at the end of winter quarter, 1986, they continued to make sufficient academic progress, they would be removed from probation status.

NOTICE OF CONTINUED INSUFFICIENT ACADEMIC PROGRESS

Students placed on Level 1 Probation during summer, 1985, were informed that if they did not make sufficient academic progress during fall quarter, 1985, they would be placed on Level 2 Probation. If, at the end of winter quarter, 1986, they continued to make insufficient academic progress, they would be suspended from further registration for one year.

RETURNING PROBATION STUDENTS AND STUDENTS WHO MADE INSUFFICIENT ACADEMIC PROGRESS FOR THE FIRST TIME DURING FALL QUARTER, 1985

Of the 681 students placed on Level 1 Probation during summer, 1985, 54% (N=367) registered for fall quarter, 1986. Another 617 students who had not previously been on probation made insufficient academic progress during fall quarter, 1986; they were given "General Warning" letters. It is these students with whom this study is concerned.

QUESTIONS OF CONCERN

Two primary questions are addressed in this study. First, is there a relationship between scores earned on placement tests taken at the time of admission to General College and subsequent insufficient academic progress? The second question or set of questions of interest has to do with the gender and ethnicity of students on probation and in the "General Warning" group.

Is There a Relationship Between Placement Test Scores and Insufficient Academic Progress?

TESTS AS PREDICTORS

The question often arises about the viability of paper and pencil measures as predictors of academic success. In an unpublished study, the author found that pre-college scores on the ACT and PSAT were not good predictors of academic success for students who registered in General College for the first time during fall quarter, 1980 (O'Hare, 1984). Would scores earned on placement tests serve as indicators of future achievement for General College students when it appears that ACT and PSAT scores do not?

PLACEMENT TESTS

After admission but before their initial registration, General College students take a battery of tests to measure the students' ability to read, to write, and to compute whole numbers, arithmetic, and algebra. The placement battery consists of a standardized reading and writing test, the Comparative Guidance and Placement Test, and a set of three computational skills tests developed by General College faculty members. Test scores are used to assist students and their advisers in selecting appropriate courses. Specific groups of skills courses are recommended for students scoring in various ranges on each of the tests.

PURPOSE AND USE OF PLACEMENT TEST SCORES

Placement test scores are not intended to be used to predict academic success. The sole purpose of a placement test is to suggest present skill level. Nevertheless, since it might be suspected that students who make insufficient academic progress may have low skill levels at admission, statistics were calculated to determine whether there is a relationship between placement test scores and making insufficient academic progress.

Is There a Relationship Between Gender and Ethnicity and Insufficient Academic Progress?

WHO ARE THE PROBATION STUDENTS WHO RETURNED FOR FALL, 1985?

Slightly more than half of the students placed on probation during summer, 1985 (54%), returned to school fall quarter. The first question to be answered was, who are these students in terms of gender and ethnic group? Specifically, of the 681 students placed on probation during summer, 1985, what number and percent within gender groups and ethnic groups registered for fall quarter, and what was their probation status at the end of fall quarter, 1985?

IS BEING IN AN INSUFFICIENT ACADEMIC PROGRESS GROUP INDEPENDENT OF GENDER OR ETHNIC GROUP?

The second question addressed was whether or not belonging to a given gender or ethnic group is independent of making insufficient academic progress. This question is a follow-up to a study of the students placed on probation in summer, 1985 (O'Hare, 1986, unpublished). That study found that more males and more American racial minorities than expected (given their numbers in the student population) were placed on probation than were females or students in other ethnic groups. The author wanted to find out whether this relationship would be found for students on probation who returned to school for fall quarter, and whether the same relationship would be found for students in the "General Warning" group who made insufficient academic progress for the first time during fall, 1985.

METHOD

Measures of the Relationship Between Placement Test Scores and Insufficient Academic Progress Groups

STATISTICS ON PLACEMENT TEST SCORES

To determine whether or not there is a relationship between placement test scores and insufficient academic progress groups' means, standard deviations of available test scores were calculated, and a one-way analysis of variance and a simple regression equation were run on each of the five sub-tests (Reading, Writing, Whole Numbers, Arithmetic, and Algebra) for the Level 1, Level 2, and General Warning groups.

Level 1, Level 2 and General Warning Groups

Students in Level 1 and Level 2 probation groups were members of the original group of students placed on probation for two quarters during summer, 1985. These students, it will be recalled, had experienced up to three quarters of insufficient academic progress at the time that they were initially placed on probation. At the end of fall quarter, 1985 (the end of their first quarter on probation), it seemed useful to differentiate between students who had met minimum academic standards during their initial quarter on probation and those who did not meet the minimum standard during their first quarter on probation. A scheme of probation levels was devised for this purpose. All students were to remain on probation status for a second quarter according to the terms of their original probation notices. Under the probation levels scheme, students who performed at or above the minimum academic standard of the College during their first quarter on probation were placed on Level 1 probation for their second probation quarter. Students who did not meet minimum academic standards during their first quarter on probation were placed on Probation Level 2. A third group of students, those who failed to meet the minimum academic standard of the College for the first time during fall quarter, 1985, were placed on pre-probation status. Since students in this group were sent warning letters which generally explained their status and the consequences of continued poor academic performance, this group was called the General Warning group. It is the placement test scores of students in these three groups that are of interest in this study.

Measures of Significant Difference and Variation

A one-way analysis of variance was used to determine whether significant differences could be found among the placement test scores of students who made insufficient academic progress for varying periods of time. A simple regression equation was run on placement test scores of students in the three groups to determine the extent to which the variation among placement test scores on each of the five sub-tests could be accounted for by being a member of one of the three insufficient academic progress groups.

Adequacy of the Data

Unfortunately, scores on every sub-test were not available for all 977 students who comprised the three insufficient academic progress groups. Scores for a large number of students were lost as a result of random key-punch errors. In other instances, students did not respond to items on certain of the sub-tests. This occurred most often in the whole number, arithmetic, and algebra sub-tests. Valid test scores were available for approximately one-half (between 498 and 504) of the 977 students in the three insufficient progress groups. Since the vast majority of lost scores resulted from random key-punch error, there is no reason to believe that systematic distortion of the data occurred. However, it must be clearly noted that the data are incomplete, and therefore, the conclusions drawn from these data must be viewed with caution.

Measures of Gender and Ethnicity of Returning Summer Probation Students and General Warning Students

DESCRIPTION OF RETURNING SUMMER PROBATION STUDENTS BY GENDER AND RACIAL/ETHNIC GROUP

In an effort to describe the Summer Probation students who registered for fall quarter, 1985, gender and racial/ethnic data were gathered on students who had been placed on probation during summer, 1985, and on students from that group who registered for fall quarter. Percentages and numbers of students within gender groups and racial/ethnic groups were calculated. Percentages of returning Summer Probation students placed on Level 1 and Level 2 probation at the end of fall quarter, 1985, also were calculated by gender groups and racial/ethnic groups.

DESCRIPTION OF GENERAL WARNING STUDENTS BY GENDER AND RACIAL/ETHNIC GROUPS

The number and percentage of students who received "General Warning" letters at the end of fall quarter, 1985, were calculated to describe students in this insufficient academic progress group by gender and racial/ethnic groups.

MEASURES OF INDEPENDENCE BETWEEN INSUFFICIENT ACADEMIC PROGRESS GROUPS AND GENDER AND RACIAL/ETHNIC GROUPS

Chi squares were calculated to determine whether or not being in an insufficient academic progress group (LEVEL 1 probation, LEVEL 2 probation, or GENERAL WARNING group) is independent of gender or racial/ethnic group.

RESULTS OF THE STUDY

Relationship Between Scores on Five Placement Sub-Tests and Subsequent Insufficient Academic Progress

READING SUB-TEST SCORES

Reading sub-test scores were available for 504 students in the three insufficient academic progress groups. This sub-test measures reading ability and comprehension. The possible scores on the reading sub-test range from 0 to 35. Scores earned by students in the three insufficient academic progress groups ranged from 2 to 35. The mean score for students in the three groups was 21.65 and the standard deviation was 7.42. Table 1 shows the range, mean, and standard deviation of reading sub-test scores for students in each of the three groups. No clustering of scores was found to suggest that students who earn scores at one or another level of ability in reading may be more or less likely to make subsequent insufficient academic progress.

Reading Scores and Suggested Level of Coursework

It is strongly recommended that students who score between 0 and 14 on the reading sub-test enroll in GC 1401, Improving Study Skills, Reading Comprehension, and Vocabulary. Students who score between 15 and 23 on the reading sub-test are urged to enroll in either GC 1402, Vocabulary Development; GC 1403, Reading Comprehension and Study Skills; or GC 1404, Vocabulary in Context. If students score between 24 and 29 on the reading sub-test, they may benefit from GC 1401, 1402, 1403, or 1404; however, their need is certainly not as great as that of students scoring lower. Students who score between 30 and 35 generally do not need special assistance in reading. The range, means, and standard deviations of scores for students in the three insufficient academic progress groups indicate that many of the students in these groups could have benefited from assistance with reading skills at the time of admission to the College. However, the spread of scores in each of the three groups covered all skill levels measured by the reading sub-test.

Table 1

Summary Descriptors of Reading Sub-Test Scores

	Range	Mean	Std. Dev.	N
Level 1	5-33	20.91	7.19	78
Level 2	2-35	22.18	7.99	71
Gen. Warn.	3-35	21.71	7.36	355

Total cases = 977
Missing cases = 473 or 48.4%
Total scores available = 504

ANALYSIS OF VARIANCE AND REGRESSION EQUATION ON READING SCORES

A one-way analysis of variance run on reading sub-test scores of students in the three insufficient academic progress groups indicates no significant difference among scores earned by students in the three groups. A simple regression equation was calculated and indicated that almost none of the variation among reading scores was explained by a student's being in an insufficient academic progress group (r2=.0008). Tables 2 and 3 show the results of the analysis of variance and regression equation.

Table 2

One-Way Analysis of Variance on Reading Sub-Test Scores for Level 1, Level 2, and General Warning Groups

	Sum of Sq.	Degrees of Freedom	Mean Sq.
Between groups	64.1291	2	32.0646
Within groups	27648.1070	501	55.1858
Total	17712.2361	503	

F = .5810 Sig. = .5597 ETA squared = .0023

Table 3

Regression Equation on Reading Scores of Students in Level 1, Level 2, and General Warning Groups

	Sum of Sq.	Degrees of Freedom	Mean Sq.
Regression	21.7702	1	21.7702
Dev. from linearity	42.3589	1	42.3589

F = .7676 Sig. = .3814 r = .0280 r squared = .0008

WRITING SUB-TEST SCORES

Writing sub-test scores indicate students' skill in grammar, usage, and organization of ideas. Possible scores on the writing sub-test range from 0 to 40. Writing scores were obtained for 504 students in the three insufficient academic progress groups. Their scores ranged from a low of 7 to a high of 37. The mean score among the three groups was 23.95 and the standard deviation was 6.28. Table 4 shows the ranges of scores, means, and standard deviations for students in each of the three insufficient academic progress groups. The scores attained by students in these groups indicate that the writing sub-test is not a good predictor of subsequent insufficient academic progress.

Writing Scores and Suggested Level of Coursework

Students who score between 0 and 22 on the writing sub-test and also have scored 15 or more on the reading sub-test should enroll in GC 1411, Fundamentals of Usage and Style. In this course, students practice principles of grammar, usage, and style by doing exercises and writing sentences and paragraphs. If students score between 0 and 22 on the writing sub-test and have scored between 0 and 14 on the reading sub-test, they should not take GC 1411 or other writing courses until they have improved their reading skills. Students who score between 23 and 30 on the writing sub-test will benefit from taking GC 1411 or GC 1412, Writing Grammatical Sentences and Developing Organized Paragraphs. Students who score between 31 and 40 on the writing sub-test are ready to enroll in GC 1421, Writing Laboratory: Personal Writing, the first of two freshman composition writing courses in General College. Average scores for students in each of the three insufficient academic progress groups indicate that many of them needed GC 1411 or GC 1412. The ranges and standard deviations of scores, however, indicate that students in the three groups scored over almost the entire range of possible scores.

Table 4

Summary Descriptors of Writing Sub-Test Scores

	Range	Mean	Std. Dev.	N
Level 1	9-33	23.95	6.28	78
Level 2	8-37	23.37	5.82	71
Gen. Warn.	7-37	24.08	6.42	355

Total cases = 977
Missing cases = 473 or 48.4%
Total scores available = 504

ANALYSIS OF VARIANCE AND REGRESSION EQUATION ON WRITING SCORES

A one-way analysis of variance run on the writing sub-test scores of students in the three insufficient academic progress groups indicates no significant difference between scores earned by students in the three groups. Calculation of a simple regression equation indicated that being in an insufficient progress group accounts for little of the variation in writing sub-test scores. Tables 5 and 6 show the results of the analysis of variance and regression equation.

Table 5

One-way Analysis of Variance on Writing Sub-Test Scores for Level 1, Level 2, and General Warning Groups

	Sum of Sq.	Deg. of Freedom	Mean Sq.
Between groups	32.2336	2	16.1168
Within groups	19822.6236	501	39.5661
Total	19854.8571	503	

F = .4073 Sig. = .6656 ETA squared = .0016

Table 6

Regression Equation on Writing Scores of Students in Level 1, Level 2, and General Warning Groups

	Sum of Sq.	Deg. of Freedom	Mean Sq.
Regression	29.6186	1	29.6186
Dev. from linearity	2.6150	1	2.6150

F = .0661 Sig. = .7972 r = .0386 r squared = .0015

WHOLE NUMBER SUB-TEST SCORES

Whole number sub-test scores indicate students' ability to deal with integers at the most basic computational level. The possible scores on this sub-test are 0-7. Scores for 498 of the 977 students in the three insufficient academic progress groups were available. Their scores ranged from 1 to 7. The mean score of students in the three groups was 5.45 and the standard deviation was 1.30. Table 7 shows the range, mean, and standard deviation of scores for students in each of the three groups. Once again sub-test scores do not indicate that students attaining particular scores are more or less likely to make subsequent insufficient academic progress.

Whole Number Scores and Suggested Level of Coursework

Whole number sub-test scores are used in combination with other computational sub-test scores (arithmetic and algebra) to determine appropriate course placement for students. For example, students who score between 0 and 3 on the whole number sub-test, between 0 and 19 on the arithmetic sub-test, and between 0 and 10 on the algebra sub-test should plan to take GC 1433 or GC 1439. Each of these courses is designed for students with limited background in arithmetic. Students scoring at increasingly higher levels on each of the computational sub-tests are advised to enroll in Mathematics Skills Review (GC 1434), Elementary Algebra (GC 1435), or Intermediate Algebra (GC 1445). Students in the three insufficient academic progress groups scored across the range of scores on the whole number sub-test. Mean scores for students in the three groups were over 5, scores which would seem to indicate that many students in these groups had a fair grasp of whole numbers.

Table 7

Summary Descriptors of Whole Number Sub-Test Scores

	Range	Mean	Std. Dev.	N
Level 1	1-7	5.45	1.42	77
Level 2	2-7	5.69	1.08	71
Gen. Warn.	1-7	5.40	1.32	350

Total cases = 977
Missing cases = 479 or 49.0%
Total scores available = 498

ANALYSIS OF VARIANCE AND REGRESSION EQUATION ON WHOLE NUMBER SCORES

A one-way analysis of variance run on the whole number sub-test scores of students in the three insufficient academic progress groups indicates no significant difference among scores earned by students in the three groups. A simple regression equation was calculated and indicated that little of the variance (r^2=.0013) was explained by a student's being in an insufficient academic progress group. Tables 8 and 9 show the results of the analysis of variance and regression equation.

Table 8

One-Way Analysis of Variance on Whole Number Sub-Test Scores for Level 1, Level 2, and General Warning Groups

	Sum of Sq.	Deg. of Freedom	Mean Sq.
Between groups	4.8722	2	2.4361
Within groups	840.4712	495	1.6979
Total	845.3434	497	

F = 1.4348 Sig. = .2392 ETA squared = .0058

Table 9

Regression Equation on Whole Number Scores of Students in Level 1, Level 2, and General Warning Groups

	Sum of Sq.	Deg. of Freedom	Mean Sq.
Regression	1.0845	1	1.0845
Dev. from linearity	3.7877	1	3.7877

F = 2.2308 Sig. = .1359 r = -.0358 r squared = .0013

ARITHMETIC SUB-TEST SCORES

Arithmetic sub-test scores suggest students' ability to compute integers in problems involving addition, subtraction, multiplication, and division. The possible scores on this sub-test are 0-25. Scores for 502 of the 977 students in the three insufficient academic progress groups were available and ranged from 1 to 25. The mean score of students in the three groups was 15.11 and the standard deviation was 5.13. Table 10 shows the range, mean, and standard deviation of scores for students in each of the three groups. Arithmetic sub-test scores do not indicate that students attaining particular scores are more or less likely to make subsequent insufficient academic progress.

Arithmetic Scores and Suggested Level of Coursework

Students who score between 0 and 19 on the arithmetic sub-test, in combination with scores of 0-7 on the whole number sub-test and 0-10 on the algebra sub-test, are urged to enroll in GC 1433, GC 1434, or GC 1439, all of which are skill-building courses. Students who attain arithmetic sub-test scores between 20 and 25, with whole number scores of 4-7 and algebra scores of 0-10, should enroll in a skill-building course also. Students who score between 20 and 25 on the arithmetic sub-test and achieve whole number scores of 4-7 and algebra scores of 11-20 are sufficiently prepared to enroll in an algebra course.

Table 10

Summary Descriptors of Arithmetic Sub-Test Scores

	Range	Mean	Std. Dev.	N
Level 1	3-24	15.01	4.85	77
Level 2	4-25	15.34	4.82	71
Gen. Warn.	2-25	15.09	5.26	354

Total cases = 977
Missing cases = 475 or 48.6%
Total scores available = 502

ANALYSIS OF VARIANCE AND REGRESSION EQUATION ON ARITHMETIC SCORES

A one-way analysis of variance run on the arithmetic sub-test scores of students in the three insufficient academic progress groups indicates no significant difference among scores earned by students in the three groups. A simple regression equation was calculated and indicated that none of the variance (r^2=.0000) was explained by a student's being in an insufficient academic progress group. Tables 11 and 12 (p. 13) show the results of the analysis of variance and regression equation.

Table 11

One-Way Analysis of Variance on Arithmetic Sub-Test Scores for Level 1, Level 2, and General Warning Groups

	Sum of Sq.	Deg. of Freedom	Mean Sq.
Between groups	4.5933	2	2.2967
Within groups	13179.1596	499	26.4111
Total	13183.7530	501	

F = .0870 Sig. = .9167 ETA squared = .0003

Table 12

Regression Equation on Arithmetic Scores of Students in Level 1, Level 2, and General Warning Groups

	Sum of Sq.	Deg. of Freedom	Mean Sq.
Regression	.0029	1	.0029
Dev. from linearity	4.5904	1	4.5904

F = .1738 Sig. = .6769 r = -.0005 r squared = .0000

ALGEBRA SUB-TEST SCORES

Algebra sub-test scores suggest students' ability to deal with problems involving symbols, sets, and elementary algebraic equations. The possible scores on this sub-test are 0-20. Scores for 498 of the 977 students in the three insufficient academic progress groups were available and ranged from 0 to 20. The mean score of students in the three groups was 9.19 and the standard deviation was 4.47. Table 13 (p. 14) shows the range, mean, and standard deviation of scores for students in each of the three groups. Algebra sub-test scores do not indicate that students attaining particular scores are more or less likely to make subsequent insufficient academic progress.

Algebra Scores and Suggested Level of Coursework

Students who score between 0 and 10 on the algebra sub-test need skills courses (GC 1433, 1434, or 1439) before taking elementary algebra. Students scoring between 11 and 17 on the algebra sub-test should enroll in either elementary or intermediate algebra. Students with scores of 18-20 are referred to a mathematics instructor for placement in more advanced courses. Students in the three insufficient academic progress groups scored between 0 and 20 on the algebra sub-test, which indicates that students in these groups vary widely in skill level. Means and standard deviations of the scores for students in each group indicate that many of these students needed skill-building courses at the time that they were admitted to the College.

Table 13

Summary Descriptors of Algebra Sub-Test Scores

	Range	Mean	Std. Dev.	N
Level 1		9.31	4.56	77
Level 2		8.53	4.11	71
Gen. Warn.		9.30	4.52	350

Total cases = 977
Missing cases = 479 or 49.0%
Total scores available = 498

ANALYSIS OF VARIANCE AND REGRESSION EQUATION ON ALGEBRA SCORES

A one-way analysis of variance run on the algebra sub-test scores of students in the three insufficient academic progress groups indicates no significant difference among scores earned by students in the three groups. A simple regression equation was calculated and indicated that almost none of the variance (r^2=.0003) was explained by a student's being in an insufficient academic progress group. Tables 14 and 15 (p. 15) show the results of the analysis of variance and of the regression equation.

Table 14

One-Way Analysis of Variance on Algebra Sub-Test Scores for Level 1, Level 2, and General Warning Groups

	Sum of Sq.	Deg. of Freedom	Mean Sq.
Between groups	35.5989	2	17.7995
Within groups	9893.2786	495	19.9864
Total	9928.8775	497	

F = .8906 Sig. = .4111 ETA squared = .0036

Table 15

Regression Equation on Algebra Scores of Students in Level 1, Level 2, and General Warning Groups

	Sum of Sq.	Deg. of Freedom	Mean Sq.
Regression	2.8110	1	2.8110
Dev. from linearity	32.7879	1	32.7879

F = 1.6405 Sig. = .2009 r = -.0168 r squared = .0003

Relationship Between Gender or Ethnicity and Insufficient Academic Progess

DESCRIPTIVE DATA ON STUDENTS ON LEVEL 1 AND LEVEL 2 PROBATION

Gender and Ethnicity of Summer Probation Students

During summer, 1985, 681 students were placed on probation because they had not made sufficient academic progress. Of the students in the summer probation group, 434 (64%) were male, 232 (34%) were female, and 15 (2%) could not be identified by gender. Racial/ethnic data collected on these students showed

that 37 students identified themselves as American Indian, 16 identified themselves as Asian, 85 identified themselves as Black, 19 identified themselves as Chicano-Spanish, 6 identified themselves as International Students, and 399 identified themselves as White. It was of interest to determine in what numbers these students returned to school for fall quarter, 1985, and in what numbers they did or did not make sufficient academic progress during fall quarter.

Gender and Ethnic Composition of Summer Probation Students Who Registered Fall Quarter, 1985.

Three hundred and sixty-two Summer Probation students (53%) registered in General College for fall quarter, 1985. Slightly more than one-half of the males (55%) and females (53%) among the Summer Probation students returned to school for fall quarter. The percentages of returning Summer Probation students among the six ethnic groups ranged from 24% (American Indian) to 83% (International Students). Table 16, below, shows the number of Summer Probation students by racial/ethnic group and the total number and percentage of returning students within each racial/ethnic group, as well as the number and percentage of students within each racial/ethnic group who were placed on Level 1 or Level 2 probation at the end of fall quarter, 1985.

Table 16

Number and Percentages of Original Summer Probation Students Who Returned to School Fall Quarter, 1985, by Racial/Ethnic Group

	Original Summer Probation Group (N=681) (%=100)	Level 1 Probation Group N=186) (%=.27)		Level 2 Probation Group (N=176) (%=.26)		All Returning Summer Prob. Students (Lev.1+Lev.2) (N=362) (%=.53)	
	n	n	%	n	%	n	%
American Indian	37	4	.11	5	.14	9	.24
Asian	16	4	.25	5	.31	9	.56
Black	85	31	.36	21	.25	52	.61
Chicano/Spanish	19	2	.11	5	.26	7	.37
International	6	2	.33	3	.50	5	.83
White	399	121	.30	111	.28	232	.58
Missing Data	119	22		26		48	

While slightly over one-half of the students placed on probation during summer, 1985, returned to school fall quarter, a differential return rate was observed for students in the six ethnic groups. Less than one-fourth (24%) of the American Indian students and just over one-third (37%) of the Chicano/Spanish students returned for fall quarter, compared to over a 50% return rate for students in all other ethnic groups.

Racial/Ethnic Composition of Level 1, Level 2, and General Warning Groups and Independence of Events

Table 17 (p. 18) shows a cross-tabulation of students in the three insufficient progress groups by racial/ethnic group. The two most predominantly represented racial/ethnic groups are Whites (66%) and Blacks (12%), with other racial/ethnic groups being represented in a range from .5% for Spanish to 2.7% for American Indians. The concern raised by an earlier study (O'Hare, 1986), in which it was found that more American minorities than expected, given their number in the student population, were placed on probation during summer, 1985, led the author to ask whether this result would hold for students in the insufficient academic progress groups at the end of fall quarter, 1985. To address this question, a chi square was calculated to test the independence of racial/ethnic group membership and membership in an insufficient academic progress group. The result of the chi square calculation showed that the relationship found in the earlier study did not hold for students in the current insufficient progress groups. Membership in a racial/ethnic group and being in an insufficient academic progress group at the end of fall quarter, 1985, are independent events.

Table 17

Cross-Tabulation and Chi Square Results for Students in Level 1, Level 2, and General Warning Groups by Racial/Ethnic Groups

Number Row % Column % Total %	Level 1	Level 2	Gen. Warn.	Row Total
American Indian	4 15.4 2.2 .4	5 19.2 2.8 .5	17 65.4 2.8 1.7	26 2.7
Asian	4 9.5 2.2 .4	5 11.9 2.8 .5	33 78.6 2.8 3.4	42 4.3
Black	31 26.5 16.7 3.2	21 17.9 11.9 2.1	65 55.6 10.6 6.7	117 12.0
Chicano	2 15.4 1.1 .2	2 15.4 1.1 .2	9 69.2 1.5 .9	13 1.3
International	2 15.4 1.1 .2	3 23.1 1.7 .3	8 61.5 1.3 .8	13 1.3
Spanish	0 0 0 0	3 60.0 1.7 .3	2 40.0 .3 .2	5 .5
White	121 18.6 65.1 12.4	111 17.1 63.1 11.4	417 64.3 67.8 42.7	649 66.4
Missing	22 19.6 11.8 2.3	26 23.2 14.8 2.7	64 57.1 10.4 6.6	112 11.5
Column Total	186 19.0	176 18.0	615 62.9	977 100.0

Chi Square = 18.75356 with 14 df. Sig. = .1746

DISCUSSION

THE STUDENTS OF INTEREST

Three hundred and sixty-two students who were placed on a two-quarter academic probation during summer, 1985, returned to register for fall quarter. All of the students in this group had a history of up to four quarters of insufficient academic progress when they were placed on probation during the summer. Therefore, it was decided that these students should remain on probation status for two quarters (fall and winter) even if they met minimum academic standards during fall quarter. At the end of fall quarter, these students were divided into two groups--students who met minimum academic standards during their first quarter on probation and students who did not meet the minimum academic standards during their first quarter on probation. Students who made sufficient academic progress during their first quarter on probation were placed on Level 1 probation (N=186) for the remaining quarter of their original two-quarter probation term. Students placed on Level 1 probation were sent letters notifying them about their probation status, congratulating them on their success during their first quarter on probation, wishing them continued success, and admonishing them about the consequences of not meeting minimum academic standards in the future. Probation students who did not make sufficient academic progress during fall quarter (their first quarter of a two-quarter probation term) were placed on Level 2 probation (N=176). These students were sent letters informing them about their probation status, offering assistance through services available in the College, and notifying them that failure to meet minimum academic standards during their second quarter on probation would result in a one-year suspension from registration in the College.

Another 617 students who made insufficient academic progress for the first time during fall quarter, 1985, were placed on General Warning status. General Warning is a pre-probation status. Students in this group are sent letters explaining their status, offering them academic support services, and warning them about the consequences of continued substandard academic performance.

QUESTIONS POSED ABOUT STUDENTS IN THE THREE INSUFFICIENT ACADEMIC PROGRESS GROUPS

It was hypothesized that students in the three insufficient academic progress groups could not be differentiated by the scores that they attained on placement tests in the areas of reading, writing, whole numbers, arithmetic, and algebra which all General College students take after admission to the College. It was further hypothesized that being a member of a gender or racial/ethnic group is independent of being in an insufficient academic progress group. Both hypotheses were borne out.

PLACEMENT TEST SCORES AND SUBSEQUENT INSUFFICIENT ACADEMIC PROGRESS

A one-way analysis of variance and a simple regression equation were run on each of the five sub-test scores in the placement battery for students in the three insufficient academic progress groups. Neither measure reached the level of significance (.05) necessary to reject the null hypothesis. No significant differences were found among test scores for students in the three groups. Measures of central tendency revealed that sub-test scores for students in all

three groups varied over a wide range. Regression equations indicated that little or none of the variation among test scores was accounted for by membership in an insufficient academic progress group.

GENDER AND ETHNICITY AND INSUFFICIENT ACADEMIC PROGRESS

An earlier study (O'Hare, 1986) found that gender and ethnicity were not independent events for students in the original summer probation group. The opposite was found for students in the three insufficient academic progress groups at the end of fall quarter, 1985. Chi square analysis indicated that no relationship existed between gender or racial/ethnic group membership and membership in an insufficient academic progress group at the end of fall quarter, 1985.

CONCLUSIONS

The present study found that placement test scores do not predict subsequent insufficient academic progress either for students who have a history of insufficient progress (1-4 quarters) or for students who make insufficient progress for the first time. Placement tests, by design, are not meant to be predictors of future achievement. Other factors may be expected to play a greater role in students' lack of academic success. Factors that should be considered may include whether the students enrolled in the courses suggested by their test scores, whether they completed these courses if, in fact, they enrolled in them, the extent of students' motivation to succeed academically, and the multitude of socio/cultural and financial factors on and off campus that impinge on the time and energy of students.

The present study found that gender and racial/ethnic group membership are independent of membership in an insufficient academic progress group. Concern had been expressed by the College's affirmative action officer and others that any student progress system be monitored for its potential adverse and differential impact on students by gender or racial/ethnic group. The results of an earlier study (O'Hare, 1986) found more males than expected and more American racial minorities than expected, given their numbers in the student population, to be in the Summer Probation group. This finding was not replicated in the present study. While further review of future insufficient academic progress students must be conducted, it appears that the new student progress review system does not affect students differentially by gender or racial/ethnic group.

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